

**COLORADO DISCHARGE PERMIT SYSTEM (CDPS)
FACT SHEET FOR PERMIT NUMBER CO0039641
CITY OF DELTA
CITY OF DELTA WASTEWATER TREATMENT PLANT
DELTA COUNTY**

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I. TYPE OF PERMIT

- A. Permit Type:** Domestic - Major Municipal, Mechanical Plant, Fifth Renewal
- B. Discharge To:** Surface Water

II. FACILITY INFORMATION

- A. SIC Code:** 4952 Sewerage Systems
- B. Facility Classification:** Class B per Section 100.5.2 of the Water and Wastewater Facility Operator Certification Requirements
- C. Facility Location:** 1398 HWY 50, Delta, CO 81416
Latitude: 38° 45' 0.7" N, Longitude: 108° 6' 6.3" W
- D. Permitted Feature:** 002A, following disinfection prior to discharge into an in-river diffuser for direct discharge into the Gunnison River. 38° 45' 1.3760" N, 108° 6' 1.9111" W
- The location(s) provided above will serve as the point(s) of compliance for this permit and are appropriate as they are located after all treatment and prior to discharge to the receiving water.
- E. Facility Flows:** 2.45 MGD

ISSUED

EFFECTIVE

EXPIRATION

F. Major Changes From Last Renewal:

The previous limit for *E. coli* was a typo. For *E. coli*, the Division establishes the 7-day geometric mean limit as two times the 30-day geometric mean limit and also includes maximum limits of 2,000 colonies per 100 ml (30-day geometric mean) and 4,000 colonies per 100 ml (7-day geometric mean).

The previous limit for TRC was also a typo. The previous and current calculated effluent limits for TRC are greater than the 0.5 mg/l daily maximum limit that is allowed by the State Regulations for Effluent Limitations. Therefore the 0.5 mg/l limit has been added to the permit.

Potentially dissolved selenium will have an extended compliance schedule.

III. RECEIVING STREAM

A. Waterbody Identification: *COGULG02, the Gunnison River*

B. Water Quality Assessment:

An assessment of the stream standards, low flow data, and ambient stream data has been performed to determine the assimilative capacities for *the Gunnison River* for potential pollutants of concern. This information, which is contained in the Water Quality Assessment (WQA) for this receiving stream(s), also includes an antidegradation review, where appropriate. The Division's Permits Section has reviewed the assimilative capacities to determine the appropriate water quality-based effluent limitations as well as potential limits based on the antidegradation evaluation, where applicable. The limitations based on the assessment and other evaluations conducted as part of this fact sheet can be found in Part I.A of the permit.

Permitted Feature 002A will continue to be the authorized discharge point to the receiving stream.

IV. FACILITY DESCRIPTION

A. Infiltration/Inflow (I/I)

During high flow months, the average daily flow is ~1.27 MGD. As per its permit application, the City of Delta attributes approximately 37% of the flow to industrial and commercial sources. Based on a population in the service area of 8,915 as indicated by the permit application, and 63% of the flows noted above, the flow per capita per day is 142/person/day.

According to the City of Delta, irrigation season usually starts around the middle of March and ends in late October. I&I becomes a problem during the irrigation months when the groundwater table begins to rise. The City is taking a proactive approach to reduce I&I via sewer line inspections, line replacement, periodic inspection, and grouting of manholes. In addition, the City of Delta is in the process of identifying I/I sources for 2013 to reduce the inflow of leached selenium into the collection system.

No compliance schedule is needed at this time.

B. Lift Stations

Table IV-1 summarizes the information provided in the renewal application for the lift stations in the service area.

Table IV-1 – Lift Station Summary

Station Name/#	Firm Pump Capacity (gpm)	Peak Flows (MGD)	% Capacity (based on peak flow)
G-96	150	0.052	24
H-20	150	0.048	22
H-38	150	0.025	12
John Deere	150	0.065	30
Safeway	125	0.011	5
Walmart	125	0.02	9
Gunnison R. Drive	125	0.033	15
Vo-Tech	100	0.006	3

C. Chemical Usage

The permittee stated in the application that they utilize five chemicals in their treatment process. The MSDS sheets have been reviewed and the following chemicals have been approved for use and are summarized in the following table.

Table IV-2 – Chemical Additives

Chemical Name	Purpose	Constituents of Concern
<i>Gaseous chlorine</i>	<i>Disinfection</i>	<i>Chlorine</i>
<i>Polymer Stockhausen Praeston K144L</i>	<i>Sludge dewatering</i>	<i>Hydrocarbon, isopropyl alcohol</i>
<i>Round up</i>	<i>Herbicide</i>	<i>Isopropylamine Salt of Glyphosate</i>
<i>2-4-D</i>	<i>Herbicide</i>	<i>2,4-D acid, dimethylamine salt</i>
<i>Alum</i>	<i>Snail control</i>	<i>Aluminum sulfate</i>

Chemicals deemed acceptable for use in waters that will or may be discharged to waters of the State are acceptable only when used in accordance with all state and federal regulations, and in strict accordance with the manufacturer's site-specific instructions.

D. Treatment Facility, Facility Modifications and Capacities

The facility consists of a rotary fine screen, aerated grit chamber, two rectangle primary clarifiers rotating biological contactors, two secondary clarifiers, two aerobic digesters, centrysis centrifuge, and two chlorine contact basins. The permittee has not performed any construction at this facility that would change the hydraulic capacity of 2.45 MGD or the organic capacity of 5000 lbs BOD₅/day, which were specified in Site Approval 3589. That document should be referred to for any additional information.

Pursuant to Section 100.5.2 of the Water and Wastewater Facility Operator Certification Requirements, this facility will require a Class B certified operator.

E. Biosolids Treatment and Disposal

Biosolids are treated in an aerobic digester. Liquid is removed in a centrifuge, then the biosolids are applied to on-site drying beds.

1. EPA General Permit

EPA Region 8 issued a General Permit (effective October 19, 2007) for Colorado facilities whose operations generate, treat, and/or use/dispose of sewage sludge by means of land application, landfill, and surface disposal under the National Pollutant Discharge Elimination System. All Colorado facilities are required to apply for and to obtain coverage under the EPA General Permit.

2. Biosolids Regulation (Regulation No. 64, Colorado Water Quality Control Commission)

While the EPA is now the issuing agency for biosolids permits, Colorado facilities that land apply biosolids must comply with requirements of Regulation No. 64, such as the submission of annual reports as discussed later in this rationale.

V. PERFORMANCE HISTORY

A. Monitoring Data

1. Discharge Monitoring Reports – The following tables summarize the effluent data reported on the Discharge Monitoring Reports (DMRs) for the previous permit term, from January 2009 through June 2011 for Outfall 001A and from July 2011 through October 2012 for Outfall 002A.

Table V-1 – Summary of DMR Data for Permitted Feature 001A

<i>Parameter</i>	<i># Samples or Reporting Periods</i>	<i>Reported Average Concentrations Avg/Min/Max</i>	<i>Reported Maximum Concentrations Avg/Min/Max</i>	<i>Previous Avg/Max/AD Permit Limit</i>	<i>Number of Limit Excursions</i>
<i>Influent Flow (MGD)</i>	46	1/0.81/1.4	1.1/0.84/1.5	Report/Report	
<i>Effluent Flow (MGD)</i>	30	0.99/0.82/1.2	1.1/0.87/1.3	2.45/NA	
<i>pH (su)*</i>	30	7.3/7.1/7.5	7.7/7.5/8	6.5-9.0 - NA	
<i>Fecal Coliform (#/100 ml)**</i>	2	56/41/77	207/181/236	NA/NA	
<i>E. coli (#/100 ml)**</i>	28	191/25/1265	501/48/3048	2000/4000	
<i>TRC (mg/l)</i>	28	0.017/0.007/0.025	0.048/0.03/0.05	Report/0.05	
<i>NH3 as N, Tot (mg/l)</i>	30	7.7/4/12	9.6/5/16	Report/Report	
<i>BOD5, influent (mg/l)</i>	46	170/123/241	196/134/306	NA/NA/	
<i>BOD5, influent (lbs/day)</i>	46	1417/1161/1941	1617/1259/2448	NA/NA/	
<i>BOD5, effluent (mg/l)</i>	30	13/9/17	16/11/21	30/45/	
<i>BOD5 (% removal)</i>	30	93/90/95	NA/NA/NA	85/NA/	
<i>TSS (% removal)</i>	30	96/93/97	NA/NA/NA	85/NA/	
<i>Cu, Dis (µg/l)</i>	28	26/8.2/373	26/8.2/373	Report/Report	
<i>CN, Tot (µg/l)</i>	1	NA/NA/NA	0/<20/0	NA/NA	
<i>Se, Dis (µg/l)</i>	28	8.3/4/14	8.3/4/14	Report/Report	
<i>WET, chronic</i>					
<i>pimephales toxicity, Stat Diff</i>	9	//	92/25/100	<i>Report</i>	
<i>pimephales toxicity, IC25</i>	9	//	91/15/100		
<i>ceriodaphnia toxicity, Stat Diff</i>	9	//	100/100/100	<i>Report</i>	
<i>ceriodaphnia toxicity, IC25</i>	9	//	100/100/100		
<i>*The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum column</i>					
<i>** Geometric mean</i>					
<i>NA means Not Applicable</i>					

Table V-2 – Summary of DMR Data for Permitted Feature 002A

Parameter	# Samples or Reporting Periods	Reported Average Concentrations Avg/Min/Max	Reported Maximum Concentrations Avg/Min/Max	Previous Avg/Max/AD Permit Limit	Number of Limit Excursions
Effluent Flow (MGD)	16	1.1/0.81/1.4	1.2/0.84/1.5	2.45/NA	
pH (su)*	16	7.3/7.1/7.5	7.7/7.6/8	6.5-9.0 - NA	
E. coli (#/100 ml)**	16	149/19/1211	450/22/2544	5547/11094	
TRC (mg/l)	16	0.28/0.03/0.4	0.55/0.05/0.75	0.6/0.9	
NH3 as N, Tot (mg/l)	16	6.9/3.4/12	8.9/4.8/16	50/50	
BOD5, influent (mg/l)	46	170/123/241	196/134/306	NA/NA/	
BOD5, influent (lbs/day)	46	1417/1161/1941	1617/1259/2448	NA/NA/	
BOD5, effluent (mg/l)	16	11/9/13	13/9/16	30/45/	
BOD5 (% removal)	16	93/91/94	NA/NA/NA	85/NA/	
TSS, effluent (mg/l)	16	9.3/8/11	10/9/12	30/45/	
TSS (% removal)	16	96/94/97	NA/NA/NA	85/NA/	
Oil and Grease (mg/l)	16	NA/NA/NA	0/0/0	NA/10/	
TDS (mg/l)		//	//	Report/Report/	
PWS intake (mg/l)	16	151/126/224	NA/NA/NA	Report/Report/	
WWTF effluent (mg/l)	16	1351/1086/1561	NA/NA/NA	Report/Report/	
Se, Dis (µg/l)	16	9.5/6.2/14	9.5/6.2/14	Report/Report	
Wet, acute					
pimephales, LC50	6	//	100/100/100	LC50>=IWC	
ceriodaphnia LC50	6	//	100/100/100		
*The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum column					
** Geometric mean NA means Not Applicable					

2. Additional Data –The following table summarizes data provided by the permittee as a part of their selenium study.

Table V-3 – Summary of Additional Data: Effluent Data from 002A for Selenium

DATE	SELENIUM (UG/L)
4/7/09	7.29
5/5/09	4.04
6/2/09	5.85
7/7/09	9.60
8/4/09	9.18
9/2/09	9.81
10/7/09	8.67
11/10/09	8.49
12/2/09	7.38
1/6/10	7.00
2/2/10	7.44
3/4/10	8.08
4/7/10	6.98
5/4/10	7.90
6/8/10	8.28
7/8/10	8.06
8/13/10	12.40
9/9/10	9.32
10/7/10	11.80
11/4/10	9.16
12/8/10	7.50
1/6/10	7.36
2/3/11	6.69
3/2/11	6.79
4/7/11	5.49
5/10/11	7.13
6/9/11	11.12
7/12/11	14.00
8/3/11	10.00
9/9/11	11.20
10/7/11	11.50
11/8/11	7.98
12/6/11	8.27
1/11/12	7.22
2/7/12	7.19
3/13/12	7.20
4/10/12	7.02
5/4/12	6.17
6/4/12	7.55
7/10/12	14.30
8/8/12	14.00

B. Compliance With Terms and Conditions of Previous Permit

1. Effluent Limitations – The data shown in the preceding table(s) indicates compliance with the numeric limitations of the previous permit.

In accordance with 40 CFR Part 122.41(a), any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

2. Other Permit Requirements – The permittee has been in compliance with all other aspects of the previous permit.

VI. DISCUSSION OF EFFLUENT LIMITATIONS

A. Regulatory Basis for Limitations

1. Technology Based Limitations
 - a. Federal Effluent Limitation Guidelines – The Federal Effluent Limitation Guidelines for domestic wastewater treatment facilities are the secondary treatment standards. These standards have been adopted into, and are applied out of, Regulation 62, the Regulations for Effluent Limitations.
 - b. Regulation 62: Regulations for Effluent Limitations – These Regulations include effluent limitations that apply to all discharges of wastewater to State waters and are shown in Section VIII of the WQA. These regulations are applicable to the discharge from the City of Delta WWTF.
2. Numeric Water Quality Standards - The WQA contains the evaluation of pollutants limited by water quality standards. The mass balance equation shown in Section VI of the WQA was used for most pollutants to calculate the potential water quality based effluent limitations (WQBELs), M_2 , that could be discharged without causing the water quality standard to be violated. For ammonia, the AMMTOX Model was used to determine the maximum assimilative capacity of the receiving stream. A detailed discussion of the calculations for the maximum allowable concentrations for the relevant parameters of concern is provided in Section V of the Water Quality Assessment developed for this permitting action.

The maximum allowable effluent pollutant concentrations determined as part of these calculations represent the calculated effluent limits that would be protective of water quality. These are also known as the water quality-based effluent limits (WQBELs). Both acute and chronic WQBELs may be calculated based on acute and chronic standards, and these may be applied as daily maximum (acute) or 30-day average (chronic) limits.

3. Narrative Water Quality Standards - Section 31.11(1)(a)(iv) of The Basic Standards and Methodologies for Surface Waters (Regulation No. 31) includes the narrative standard that State surface waters shall be free of substances that are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life.

- a. Whole Effluent Toxicity - The Water Quality Control Division has established the use of WET testing as a method for identifying and controlling toxic discharges from wastewater treatment facilities. WET testing is being utilized as a means to ensure that there are no discharges of pollutants "in amounts, concentrations or combinations which are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life" as required by Section 31.11 (1) of the Basic Standards and Methodologies for Surface Waters. The requirements for WET testing are being implemented in accordance with Division policy, Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010). Note that this policy has recently been updated and the permittee should refer to this document for additional information regarding WET.

4. Water Quality Regulations, Policies, and Guidance Documents

- a. Antidegradation - Since the receiving water is Undesignated, an antidegradation review is required pursuant to Section 31.8 of The Basic Standards and Methodologies for Surface Water. As set forth in Section VII of the WQA, an antidegradation evaluation was conducted for pollutants when water quality impacts occurred and when the impacts were significant. Based on the antidegradation requirements and the reasonable potential analysis discussed above, antidegradation-based average concentrations (ADBACs) may be applied.

According to Division procedures, the facility has three options related to antidegradation-based effluent limits: (1) the facility may accept ADBACs as permit limits (see Section VII of the WQA); (2) the facility may select permit limits based on their non-impact limit (NIL), which would result in the facility not being subject to an antidegradation review and thus the antidegradation-based average concentrations would not apply (the NILs are also contained in Section VII of the WQA); or (3) the facility may complete an alternatives analysis as set forth in Section 31.8(3)(d) of the regulations which would result in alternative antidegradation-based effluent limitations.

The effluent must not cause or contribute to an exceedance of a water quality standard and therefore the WQBEL must be selected if it is lower than the NIL. Where the WQBEL is not the most restrictive, the discharger may choose between the NIL or the ADBAC: the NIL results in no increased water quality impact; the ADBAC results in an "insignificant" increase in water quality impact. The ADBAC limits are imposed as two-year average limits.

- b. Antibacksliding – As the receiving water is designated Reviewable or Outstanding, and the Division has performed an antidegradation evaluation, in accordance with the Antidegradation Guidance, the antibacksliding requirements in Regulation 61.10 have been met.
- c. Determination of Total Maximum Daily Loads (TMDLs) –This rationale and the accompanying permit include TMDLs developed as specified in *Total Maximum Daily Load Assessment, Gunnison River and Tributaries, Uncompahgre River and Tributaries, Delta/Mesa/Montrose Counties, Colorado* and the corresponding waste load allocations (WLAs) for selenium. As required under the Clean Water Act Section 303(d), these TMDLs have been submitted, through the normal public notification process, to EPA Region VIII for their review and approval, and were approved on February 14, 2011.

The receiving stream to which the City of Delta WWTF discharges is also currently listed on the State's 303(d) list for development of TMDLs for *E. coli*. However, the TMDL has not yet been

finalized. Although this permit establishes limits for these pollutants, they do not represent the TMDLs and waste load allocations, and are therefore subject to change upon finalization of an approved TMDL for this segment.

- d. Colorado Mixing Zone Regulations – Pursuant to section 31.10 of The Basic Standards and Methodologies for Surface Water, a mixing zone determination is required for this permitting action. The Colorado Mixing Zone Implementation Guidance, dated April 2002, identifies the process for determining the meaningful limit on the area impacted by a discharge to surface water where standards may be exceeded (i.e., regulatory mixing zone). This guidance document provides for certain exclusions from further analysis under the regulation, based on site-specific conditions.

The guidance document provides a mandatory, stepwise decision-making process for determining if the permit limits will not be affected by this regulation. Exclusion, based on Extreme Mixing Ratios, may be granted if the ratio of the facility design flow to the chronic low flow (30E3) meets certain criteria.

This facility is discharging to a segment that contains threatened and endangered (T&E) species, as listed by the US Fish and Wildlife (F&W), which affects the aquatic life standards. Under a Memorandum of Agreement (MOA) between the US F&W and the Division, this facility needed to meet one of several options outlined in the MOA. The facility opted to install a diffuser on the discharge which means instantaneous mixing will occur, and therefore the mixing zone considerations (dilution) apply. The previous WQA and referenced in the amendment Fact Sheet, allowed 50% of the available dilution to be used, based on the installation of the diffuser. Since the diffuser remains in use, this dilution remains applicable to the discharge for aquatic-life based pollutants. Because the diffuser is in place, additional mixing zone studies are not needed at this time.

- e. Salinity Regulations – In compliance with the Colorado River Salinity Standards and the Colorado Discharge Permit System Regulations, the permittee shall monitor for total dissolved solids on a **Monthly** basis. Samples shall be taken at Permitted Feature 002A.

An evaluation of the discharge of total dissolved solids indicates that the City of Delta facility exceeds the threshold of 1 ton/day or 350 tons/year of salinity. To determine the TDS loading from this facility, the average reported TDS values were multiplied by the average flow, then by 8.34. The average was determined to be 6.1 tons/day.

The permittee completed a study of the infiltration and inflow of groundwater into their collection system that indicated the salinity problem was caused by the highly saline groundwater in the area. As noted from the monthly salinity monitoring that has been done, effluent salinity levels tend to increase once the irrigation ditches are opened in the spring, and then tend to decrease late in the fall and winter when the irrigation flows have been turned off. Since removal of seepage into the collection system is not cost effective, no further studies are needed and the monthly monitoring will continue.

- g. Reasonable Potential Analysis – Using the assimilative capacities contained in the WQA, an analysis must be performed to determine whether to include the calculated assimilative capacities as WQBELs in the permit. This reasonable potential (RP) analysis is based on the Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on

Reasonable Potential, dated December, 2002. This guidance document utilizes both quantitative and qualitative approaches to establish RP depending on the amount of available data.

A qualitative determination of RP may be made where ancillary and/or additional treatment technologies are employed to reduce the concentrations of certain pollutants. Because it may be anticipated that the limits for a parameter could not be met without treatment, and the treatment is not coincidental to the movement of water through the facility, limits may be included to assure that treatment is maintained.

A qualitative RP determination may also be made where a federal ELG exists for a parameter, and where the results of a quantitative analysis results in no RP. As the federal ELG is typically less stringent than a limitation based on the WQBELs, if the discharge was to contain concentrations at the ELG (above the WQBEL), the discharge may cause or contribute to an exceedance of a water quality standard.

To conduct a quantitative RP analysis, a minimum of 10 effluent data points from the previous 5 years, should be used. The equations set out in the guidance for normal and lognormal distribution, where applicable, are used to calculate the maximum estimated pollutant concentration (MEPC). For data sets with non-detect values, and where at least 30% of the data set was greater than the detection level, MDLWIN software is used consistent with Division guidance to generate the mean and standard deviation, which are then used to establish the multipliers used to calculate the MEPC. If the MDLWIN program cannot be used the Division's guidance prescribes the use of best professional judgment.

For some parameters, recent effluent data or an appropriate number of data points may not be available, or collected data may be in the wrong form (dissolved vs total) and therefore may not be available for use in conducting an RP analysis. Thus, consistent with Division procedures, monitoring will be required to collect samples to support a RP analysis and subsequent decisions for a numeric limit. A compliance schedule may be added to the permit to require the request of an RP analysis once the appropriate data have been collected.

For other parameters, effluent data may be available to conduct a quantitative analysis, and therefore an RP analysis will be conducted to determine if there is RP for the effluent discharge to cause or contribute to exceedances of ambient water quality standards. The guidance specifies that if the MEPC exceeds the maximum allowable pollutant concentration (MAPC), limits must be established and where the MEPC is greater than half the MAPC (but less than the MAPC), monitoring must be established. Table VI-1 contains the calculated MEPC compared to the corresponding MAPC, and the results of the reasonable potential evaluation, for those parameters that met the data requirements. The RP determination is discussed for each parameter in the text below.

Table VI-1 – Reasonable Potential Analysis

Parameter	30-Day Average			7-Day Ave or Daily Max		
	MEPC	WQBEL (MAPC)	Reasonable Potential	MEPC	WQBEL (MAPC)	Reasonable Potential
E. coli (#/100 ml)	3076	2000	Yes	5063	4000	Yes
TRC (mg/l)	0.46	0.81	Yes (Qual)	0.84	1.1	Yes (Qual)
Nitrate as N (mg/l)	NA			NA	14626	No (Qual)
Nitrite as N (mg/l)	NA			NA	2.9	No (Qual)
NH3 as N, Tot (mg/l)	23	42	Yes (Qual)	31	93	Yes (Qual)
As, TR (µg/l)	NA	1.5	No (Qual)	NA	NA	NA
As, Dis (µg/l)	NA	19979	No (Qual)	NA	19979	No (Qual)
Cd, Dis (µg/l)	NA	50	No (Qual)	NA	242	No (Qual)
Cr+3, TR (µg/l)	NA	2938	No (Qual)	NA	2938	No (Qual)
Cr+6, Dis (µg/l)	NA	809	No (Qual)	NA	940	No (Qual)
Cu, Dis (µg/l)	39	1300	No	39	1921	No
CN, Free (µg/l)				NA	294	No (Qual)
Fe, TR (µg/l)	NA	17403	No (Qual)			
Pb, Dis (µg/l)	NA	596	No (Qual)	NA	12282	No (Qual)
Mn, Dis (µg/l)	NA	171488	No (Qual)	NA	250145	No (Qual)
Mo, TR (µg/l)	NA	15452	No (Qual)	NA	0	No (Qual)
Hg, Tot (µg/l)	NA	0.74	No (Qual)	NA	NA	NA
Ni, Dis (µg/l)	NA	9712	No (Qual)	NA	69693	No (Qual)
Se, Dis (µg/l)	23	4.6	Yes	23	273	No
Ag, Dis (µg/l)	NA	37	No (Qual)	NA	764	No (Qual)
Zn, Dis (µg/l)	NA	23620	No (Qual)	NA	25035	No (Qual)
Chloride (mg/l)	NA	36566	Monitor	NA	NA	NA
Sulfide as H2S (mg/l)	NA	0.15	Monitor	NA	NA	NA
Nonylphenol (µg/l)	NA	7	Monitor	NA	28	Monitor

B. Parameter Evaluation

BOD₅ - The BOD₅ concentrations in Reg 62 are the most stringent effluent limits and are therefore applied. These limitations are the same as those contained in the previous permit and are imposed upon the effective date of this permit.

Total Suspended Solids - The TSS concentrations in Reg 62 are the most stringent effluent limits and are therefore applied. These limitations are the same as those contained in the previous permit and are imposed upon the effective date of this permit.

Oil and Grease - The oil and grease limitations from the Regulations for Effluent Limitations are applied as they are the most stringent limitations. This limitation is the same as those contained in the previous permit and is imposed upon the effective date of this permit.

pH - This parameter is limited by the water quality standards of 6.5-9.0 s.u., as this range is more stringent than other applicable standards. This limitation is the same as that contained in the previous permit and is imposed upon the effective date of this permit.

E. coli –The calculated *E. coli* WQBEL in the WQA is greater than that allowed by the Division procedure for *E. coli*, which specifies a maximum of 2,000 organisms per 100 ml (30-day geometric mean) and 4,000 organisms per 100 ml (7-day geometric mean). A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter.

Previous monitoring as shown in Table V-1 indicates that this limitation can be met and is therefore imposed upon the effective date of the permit.

Total Residual Chlorine (TRC) - The calculated effluent limit for TRC is greater than the 0.5 mg/l daily maximum limit that is allowed by the State Regulations for Effluent Limitations, and therefore the 0.5 mg/l limit has been added to the permit. A qualitative determination of RP has been made as chlorine may be used in the treatment process. This limitation is more stringent than the previous limit, which is in error as the current limit shouldn't have been greater than 0.5 mg/l. Conversations with the permittee on February 5, 2013 indicate that the facility will be able to meet the new limitation.

Ammonia - The limitation for ammonia is based upon the WQBEL as described in the WQA. A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter. Previous monitoring as shown in Table V-1 indicates that this limitation can be met and is therefore effective immediately.

Nitrate – There is no data available regarding the presence/absence or quantification of this parameter in the discharge. Although the potential exists for this parameter to be present, the discharge is not expected to have levels that would exceed the proposed limitations. Therefore a qualitative determination of no reasonable potential has been made.

Nitrite – There is no data available regarding the presence/absence or quantification of this parameter in the discharge. Although the potential exists for this parameter to be present, the discharge is not expected to have levels that would exceed the proposed limitations. Therefore a qualitative determination of no reasonable potential has been made.

All Metals and Cyanide, except Copper and Selenium – A quantitative determination of no RP was made in the previous rationale. Considering the proposed limitations are higher than the previous proposed limitations, a qualitative determination of no RP has been made.

Potentially Dissolved Copper – The RP analysis for potentially dissolved copper was based upon the WQBEL as described in the WQA. A single data point was eliminated as a significant outlier. With the available data the log-normal program was used to determine the appropriate statistics to determine the MEPC. The MEPC was less than half of the MAPC and therefore limitations are not necessary at this time. Note that the outlier data point was approximately 1/4th of the permit limit.

Potentially Dissolved Selenium- The RP analysis for potentially dissolved selenium was based upon the WQBEL as described in the WQA. With the available data the normal program was used to determine the appropriate statistics to determine the MEPC. The MEPC was greater than the MAPC and therefore limitations are required. However, a TMDL wasteload allocation is in place for this facility, and therefore the waste load allocation of 0.094 lb/day as per the TMDL for selenium will be added to the permit. A temporary modification is listed on the segment for selenium, which supersedes the TMDL. Therefore for the duration of the temporary modification (expires December 31, 2017), a report only requirement is added to the permit. Considering that the permittee may not be able to consistently meet

the waste load allocation, the previous compliance schedule has been delayed until the expiration of the temporary modification, in accordance with Regulation 31.14(15).

Nonylphenol - There is no data available regarding the presence/absence or quantification of this parameter in the discharge. Considering the potential exists for this parameter to be present, monitoring for this parameter has been added to the permit.

Temperature - Based on the information presented in the WQA, this facility is exempt from the temperature requirements based on flow ratios.

Organics – The effluent is not expected or known to contain organic chemicals, and therefore limitations for organic chemicals are not needed in this permit.

Whole Effluent Toxicity (WET) Testing – Due to the facility type and expected pollutants, a qualitative determination of RP has been made.

1. In-Stream Waste Concentration (IWC) – Where monitoring or limitations for WET are deemed appropriate by the Division, the chronic in-stream dilution is critical in determining whether acute or chronic conditions shall apply. In accordance with Division policy, for those discharges where the chronic IWC is greater than 9.1% and the receiving stream has a Class 1 Aquatic Life use or Class 2 Aquatic Life use with all of the appropriate aquatic life numeric standards, chronic conditions will normally apply. Where the chronic IWC is less than or equal to 9.1, or the stream is not classified as described above, acute conditions will normally apply. The chronic IWC is determined using the following equation:

$$\text{IWC} = [\text{Facility Flow (FF)} / (\text{Stream Chronic Low Flow (annual)} + \text{FF})] \times 100\%$$

The flows and corresponding IWC for the appropriate discharge point are:

Permitted Feature	Chronic Low Flow, 30E3 (cfs)	Facility Design Flow (cfs)	IWC, (%)
002A	276	3.8	1

The IWC for this permit is 1%, which represents a wastewater concentration of 1% effluent to 99% receiving stream.

2. General Information – The permittee should read the WET testing section of Part I of the permit carefully, as this information has been updated in accordance with the Division's updated policy, Implementation of the Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010) . The permit outlines the test requirements and the required follow-up actions the permittee must take to resolve a toxicity incident. The permittee should also read the above mentioned policy which is available on the Permit Section website. The permittee should be aware that some of the conditions outlined above may be subject to change if the facility experiences a change in discharge, as outlined in Part II.A.2. of the permit. Such changes shall be reported to the Division immediately.

C. Parameter Speciation

For metals with aquatic life-based dissolved standards, effluent limits and monitoring requirements are typically based upon the potentially dissolved method of analysis, as required under Regulation 31, Basic Standards and Methodologies for Surface Water. Thus, effluent limits and/or monitoring requirements for these metals will be prescribed as the “potentially dissolved” form.

VII. ADDITIONAL TERMS AND CONDITIONS

A. Monitoring

Effluent Monitoring – Effluent monitoring will be required as shown in the permit document. Refer to the permit for locations of monitoring points. Monitoring requirements have been established in accordance with the frequencies and sample types set forth in the Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Industrial and Domestic Wastewater Treatment Facilities. This policy includes the methods for reduced monitoring frequencies based upon facility compliance as well as for considerations given in exchange for instream monitoring programs initiated by the permittee. Table VI-2 shows the results of the reduced monitoring frequency analysis for Permitted Feature 002A, based upon compliance with the previous permit.

Table VI-2 – Monitoring Reduction Evaluation

<i>Parameter</i>	<i>Proposed Permit Limit</i>	<i>Average of 30-Day (or Daily Max) Average Conc.</i>	<i>Standard Deviation</i>	<i>Long Term Characterization (LTC)</i>	<i>Reduction Potential</i>
<i>pH (su) Minimum</i>	<i>min 6.5</i>	7.3	0.12	7.06	None
<i>pH (su) Maximum</i>	<i>max 9.0</i>	7.7	0.12	7.94	
<i>E. coli (#/100 ml)</i>	2000	149	364	877	3 Levels
<i>TRC (mg/l)</i>	0.5	0.28	0.093	0.466	1 Level
<i>NH₃ as N, Tot (mg/l)</i>	42	6.9	3	12.9	None
<i>BOD₅, effluent (mg/l)</i>	30	11	1.2	13.4	3 Levels
<i>TSS, effluent (mg/l)</i>	30	9.3	0.95	11.2	3 Levels
<i>Oil and Grease (mg/l)</i>	10	0	0	0	3 Levels
<i>Cu, Dis (µg/l)</i>	1300	12	6.1	24.2	3 Levels
<i>Se, Dis (lbs/d)</i>	0.094	0.0195	0.055	0.1295	None

* Note that reduced monitoring for selenium is not granted based on the permittee needing a compliance schedule to meet the limitation

B. Reporting

1. Discharge Monitoring Report – The City of Delta facility must submit Discharge Monitoring Reports (DMRs) on a monthly basis to the Division. These reports should contain the required summarization of the test results for all parameters and monitoring frequencies shown in Part I.B of the permit. See the permit, Part I.B, C, D and/or E for details on such submission.
2. Special Reports – Special reports are required in the event of an upset, bypass, or other noncompliance. Please refer to Part II.A. of the permit for reporting requirements. As above, submittal of these reports to the US Environmental Protection Agency Region VIII is no longer required.

C. Signatory and Certification Requirements

Signatory and certification requirements for reports and submittals are discussed in Part I.E.6. of the permit.

D. Compliance Schedules

The following compliance schedules are included in the permit. See Part I.B of the permit for more information.

- Selenium: time for evaluation of treatment or other activities needed to meet the limit

All information and written reports required by the following compliance schedules should be directed to the Permits Section for final review unless otherwise stated.

E. Stormwater

Pursuant to 5 CCR 1002-61.3(2), wastewater treatment facilities with a design flow of 1.0 MGD or

more, or that are required to have an approved pretreatment program, are specifically required to obtain stormwater discharge permit coverage, or a Stormwater No Exposure Certification, in order to discharge stormwater from their facilities to state waters. The stormwater discharge permit applicable to wastewater treatment facilities is the CDPS General Permit for Stormwater Discharges Associated with Non-Extractive Industrial Activity.

Division records indicate that the City of Delta applied for and obtained coverage under the CDPS General Permit for Stormwater Discharges Associated with Non-Extractive Industrial Activity for the Delta WWTF facility. The CDPS certification number is COR900345.

F. Economic Reasonableness Evaluation

Section 25-8-503(8) of the revised (June 1985) Colorado Water Quality Control Act required the Division to "determine whether or not any or all of the water quality standard based effluent limitations are reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons, and are in furtherance of the policies set forth in sections 25-8-192 and 25-8-104."

The Colorado Discharge Permit System Regulations, Regulation No. 61, further define this requirement under 61.11 and state: "Where economic, environmental, public health and energy impacts to the public and affected persons have been considered in the classifications and standards setting process, permits written to meet the standards may be presumed to have taken into consideration economic factors unless:

- a. A new permit is issued where the discharge was not in existence at the time of the classification and standards rulemaking, or
- b. In the case of a continuing discharge, additional information or factors have emerged that were not anticipated or considered at the time of the classification and standards rulemaking."

The evaluation for this permit shows that the Water Quality Control Commission, during their proceedings to adopt the Classifications and Numeric Standards for Gunnison and Lower Dolores River Basins, considered economic reasonableness.

Furthermore, this is not a new discharger and no new information has been presented regarding the classifications and standards. Therefore, the water quality standard-based effluent limitations of this permit are determined to be reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons and are in furtherance of the policies set forth in Sections 25-8-102 and 104. If the permittee disagrees with this finding, pursuant to 61.11(b)(ii) of the Colorado Discharge Permit System Regulations, the permittee should submit all pertinent information to the Division during the public notice period.

Lori Mulsoff
February 5, 2013

VIII. REFERENCES

- A. Colorado Department of Public Health and Environment, Water Quality Control Division Files, for Permit Number CO0039641.

- B. “Design Criteria Considered in the Review of Wastewater Treatment Facilities”, Policy 96-1, Colorado Department of Public Health and Environment, Water Quality Control Commission, April 2007.
- C. Basic Standards and Methodologies for Surface Water, Regulation No. 31, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 31, 2013.
- D. Classifications and Numeric Standards for Gunnison and Lower Dolores River Basins, Regulation No. 35, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2013.
- E. Colorado Discharge Permit System Regulations, Regulation No. 61, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 30, 2012.
- F. Regulations for Effluent Limitations, Regulation No. 62, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective July 30, 2012.
- G. Pretreatment Regulations, Regulation No. 63, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective April 01, 2007.
- H. Biosolids Regulation, Regulation No. 64, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2010.
- I. Colorado River Salinity Standards, Regulation No. 39, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective August 30, 1997.
- J. Section 303(d) List of Water Quality Limited Segments Requiring TMDLs, Regulation No 93, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2012.
- K. Colorado’s Section 303(d) List of Impaired Waters and Monitoring and Evaluation List, Regulation No 93, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2012.
- L. Antidegradation Significance Determination for New or Increased Water Quality Impacts, Procedural Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective December 2001.
- M. Memorandum Re: First Update to (Antidegradation) Guidance Version 1.0, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 23, 2002.
- N. Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, Colorado Department of Public Health and Environment, Water Quality Control Division, effective December 2002.
- O. The Colorado Mixing Zone Implementation Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 2002.

- P. Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Domestic and Industrial Wastewater Treatment Facilities, Water Quality Control Division Policy WQP-20, May 1, 2007.
- Q. Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops, Water Quality Control Division Policy WQP-24, March 10, 2008.
- R. Implementing Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (WET) Testing, Colorado Department of Public Health and Environment, Water Quality Control Division Policy Permits-1, September 30, 2010.
- S. Policy for Conducting Assessments for Implementation of Temperature Standards in Discharge Permits, Colorado Department of Public Health and Environment, Water Quality Control Division, Policy Number WQP-23, effective July 3, 2008.
- T. Policy for Permit Compliance Schedules, Colorado Department Public Health and Environment, Water Quality Control Division Policy Number WQP-30, effective December 2, 2010.
- U. Procedural Regulations for Site Applications for Domestic Wastewater Treatment Works, Regulation No. 22, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective September 30, 2009.
- V. Regulation Controlling discharges to Storm Sewers, Regulation No. 65, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective May 30, 2008.
- W. Water and Wastewater Facility Operator Certification Requirements, Regulation No. 100, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective September 30, 2007.
- X. Total Maximum Daily Load Assessment, Gunnison River and Tributaries, Uncompahgre River and Tributaries, Delta/Mesa/Montrose Counties, Colorado, Colorado Department of Public Health and Environment, Water Quality Control Commission, approved February 14, 2011.

VIII. PUBLIC NOTICE COMMENTS

The public notice period was from **PN START DATE to PN END DATE**. No comments were received during the public notice period.

OR

The public notice period was from **PN START DATE to PN END DATE**. Comments were received from _____. Topical summaries of the comments and the response of the Division are given below.